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July 16, 2010

Ms. Michelle King  
US Centers for Disease Control and Prevention  
Division of Healthcare Quality Promotion  
1600 Clifton Road NE, Mailstop A – 07  
Atlanta, GA 30333

***RE: Draft Guideline for the Prevention and Control of Norovirus Gastroenteritis Outbreaks in Healthcare Settings***

Dear Ms. King:

The Association for Professionals in Infection Control and Epidemiology (APIC), an international association comprising greater than 13,000 infection preventionists, wishes to thank the Centers for Disease Control and Prevention for the opportunity to provide comments on the Draft Guideline for the Prevention and Control of Norovirus Gastroenteritis Outbreaks in Healthcare Settings. Our members appreciate the development of this new draft guideline which we feel will be very helpful to infection preventionists who encounter periodic outbreaks and clusters of infections caused by this viral pathogen in their affiliated facilities and settings. The microbe is very challenging when it is introduced into the clinical setting. There has been a recent systematic review of efficacy of interventions to prevent/control transmission which highlight the ongoing challenges with norovirus.<sup>1</sup>

After review of the draft guideline, APIC suggests the following modifications to the specific draft recommendations provided under major topics below:

**1. Patient Cohorting and Isolation Precautions**

*P 11. 3.A.1 Consider extending the duration of isolation or cohorting precautions for outbreaks among infants, even after resolution of symptoms, as there is a potential for prolonged viral shedding and environmental contamination. Among infants, extending contact precautions for up to 5 days after the resolution of symptoms is suggested. (Cat. II)*

**APIC Recommendation # 1.**

Consider changing infants to pediatrics or defining age of 'infants.' Also, while likely outside the dates of the initial literature search, there is additional evidence that shedding of virus is also prolonged for other extremes of age.<sup>2</sup>

*P 11. 3.C.4.c Minimize patient movements within a ward or unit.*

**APIC Recommendation # 2.**

Clarify wording that this recommendation applies to those with suspected norovirus infection.



*P11. HAND HYGIENE 3.C.1.a Perform handwashing, using soap and water, according to Standard Precautions (i.e, prior to contact with patients, medication preparation, preparation or consumption of food, insertion of invasive devices, after touching contaminated equipment, removing personal protective equipment [PPE; e.g., gloves], or toileting activities with patients with symptoms of norovirus infection).*

**APIC Recommendation # 3.**

Hand Hygiene: change the term “handwashing” to hand hygiene as standard precautions include either technique. Reinforce the recommendations in the CDC’s Hand Hygiene Guideline, 2002, that emphasize handwashing if hands are visibly soiled. It is also unclear as stated that this is intended to be directed solely to care of patients with suspect/proven norovirus infection.

*P12. 3.C.11 During outbreaks, patients on Contact Precautions for norovirus can be transferred or discharged to skilled nursing facilities as needed. If receiving facilities are unable to provide adequate cohorting or isolation provisions, it may be prudent to postpone transfers until arrangements are made for appropriate isolation or cohorting. Expedite the discharge of symptomatic or recovering patients who are medically suitable for discharge to their place of residence. (Category II)*

**APIC Recommendation # 4.**

The interfacility transfer recommendation needs clarification. This can safely be accomplished for patients who have recovered from acute illness but the intent should not be to shift risk for ongoing transmission from one setting to another. The wording of this needs to emphasize communication and collaboration between facilities when caring for sporadic or cluster/ outbreak of possible norovirus.

**APIC Recommendation # 5.**

As a proactive measure it might be useful to point to Table 2 in the 2007 CDC Isolation Guideline wherein direct care providers apply empiric precautions based on patient’s presenting symptoms and/or Kaplan criteria rather than waiting for laboratory diagnostic results. This would apply to sporadic cases as well as those that suggest a cluster or outbreak is present or ongoing.

## **2. Visitors and Personal Protective Equipment**

*P 37. Q3.C.7 states: (Visitor Policies) There was very low quality evidence demonstrating the impact of restriction and/or screening of visitors consistent with norovirus infection.*

*P 13. 3.C.2.b Clinical and environmental services staff, as well as visitors, should wear gloves and gowns when entering areas under isolation or cohorting. (Cat. IB)*

*P 15. 3.C.7.b Restrict non-essential visitors from affected areas during outbreaks of norovirus gastroenteritis. For those facilities that proceed with continued visitor privileges, screening visitors for symptoms consistent with norovirus infection is encouraged. (Cat. IB)*

Discussion: This series of statements concerning visitors may be confusing. One statement directs that visitors must wear gowns and gloves. Another statement recommends screening for non-essential visitors without defining essential and non-essential visitors.



#### **APIC Recommendation # 6.**

Consolidate recommendations on visitors and consider adopting the statement from the HICPAC Isolation Guideline 2007 regarding visitors:

*“Use of barrier precautions by visitors: The use of gowns, gloves, or masks by visitors in healthcare settings has not been addressed specifically in the scientific literature. Some studies included the use of gowns and gloves by visitors in the control of MDROs, but did not perform a separate analysis to determine whether their use by visitors had a measurable impact.”*<sup>893-895</sup>

*Family members or visitors who are providing care or having very close patient contact (e.g., feeding, holding) may have contact with other patients and could contribute to transmission if barrier precautions are not used correctly. Specific recommendations may vary by facility or by unit and should be determined by the level of interaction.”*  
(II.N.3.b.)

#### **APIC Recommendation 7.**

If the current recommendations for P 15. 3.C.7.b are retained, consider defining “non-essential visitors.”

### **3. Staff Cohorting**

*P 15. 3.C.5.a Establish protocols for staff cohorting in the event of an outbreak of norovirus gastroenteritis, where staff care for one patient cohort on their ward and do not move between patient cohorts.(Cat. IB)*

#### **APIC Recommendation 8.**

Clarify whether the staff cohorting is limited to the shift worked or to the entire length of the outbreak.

*P 11. 3.C.5.b Staff who have recovered from recent suspected norovirus infection associated with this outbreak may be best suited to care for exposed or symptomatic patients. (Cat. II)*

#### **APIC Recommendation 9.**

Add a statement “until the outbreak is resolved.”

*P 12. 3.B.2 All shared food items for patients or staff should be removed from clinical areas for the duration of the outbreak. (Cat. IB)*

#### **APIC Recommendation 10.**

Please define “shared food items.”

### **4. Environmental Disinfection**

*P 14. 3.C.12.c.1 Discard disposable patient-care items from patient rooms after patients on isolation for norovirus gastroenteritis are discharged or transferred to a healthcare facility. Unused linens remaining in a patient room should be laundered before use on another patient. (Cat. II)*

#### **APIC Recommendation 11.**



Please clarify whether this refers only to linen that is not packaged or is free linen that has possibly been contaminated by staff when obtaining laundry or bedding materials previously. Also add here, or in a separate statement, examples beyond laundry: "Consider discarding other items that cannot be appropriately cleaned such as....."

*P 14. 3.C.12.d.2 Steam cleaning of upholstered furniture present in patient rooms is suggested upon discharge. Consider discarding items that cannot be appropriately cleaned. (Cat. II)*

Discussion: This is a Category II recommendation, and the citation (Johnson CP, 2007) is acknowledged as a very weak reference in terms of detail, sample size, and power. The group appeared to go to extremes to discard even furniture. The study does not provide information regarding why cleaning and disinfection was ineffective, nor does it provide examples of items that couldn't be cleaned beyond furniture.

#### **APIC Recommendation 12.**

APIC recommends adding "upon discharge or transfer to another unit in facility." APIC believes this should be categorized as needing research and not as a Cat. II. APIC also recommends moving the last statement regarding discarding items with included examples to P 14. 3.C.12.c.1 as shown, where it is more appropriate.

### **5. Personal Protective Equipment**

*P 11. 1.A.1. Avoid exposure to vomitus or diarrhea. For a recognized outbreak, use Contact Precautions for patients with symptoms consistent with norovirus gastroenteritis. Sporadic cases of norovirus can be managed under Standard Precautions with provisions to reduce staff, visitor, and patient exposures to vomitus or diarrhea. (Cat. IB)*

Discussion: This appears to contradict the routine use of PPE as stated in 1.C.4 in which healthcare AND visitors are to wear PPE.

*P 13. 1.C.4 If norovirus infection is suspected, healthcare personnel and visitors should wear PPE to reduce the likelihood of exposure to, or contamination by vomitus or fecal material when caring for patients with symptoms of norovirus infection. Gloves and gowns are recommended for the care of patients on Contact Precautions and according to Standard Precautions for any contact with body fluids, non-intact skin, or contaminated surfaces. (Cat. IB)*

#### **APIC Recommendation 13.**

Recommend adopting statement 1.C.4 with elimination of the reference to visitors.

### **6. Foods and Food Preparation Surfaces**

*P 34. Q3.B.1 Our search did not find studies in which the recovery of norovirus from fomites, food, and water sources was directly associated with transmission of infection in healthcare settings; however transmission from these sources has been well documented in other settings.*

*P 35. Q.3.B.2 We found low-quality evidence suggesting that foods and food-preparation surfaces are a significant source of norovirus transmission in healthcare settings.<sup>112,162,163</sup>*

Discussion: The last sentence in the section states, "Food and food-preparation areas can serve as a common source of contamination with norovirus in the absence of cleaning and disinfection." The initial statement contradicts the last statement with



regard to the role that foods and food preparation surfaces play in transmission, yet there was no mention of problems related to cleaning and disinfection.

**APIC Recommendation 14.**

Provide a single, clearer statement to address the food and food preparation surface. Most food references or recommendations center on hand hygiene—without reference to the importance of cleaning and sanitizing of food surfaces.

**7. Patient Transfers and Discharges**

*P 12. 3.C.11 During outbreaks, patients on Contact Precautions for norovirus can be transferred or discharged to skilled nursing facilities as required. If receiving facilities are unable to provide adequate cohorting or isolation provisions, it may be prudent to postpone transfers until arrangements are made for appropriate isolation or cohorting. (Cat. II)*

**APIC Recommendation 15.**

Suggest elimination of last statement. This may place undue burden on the acute healthcare facility unless a stronger statement about communications with the receiving patient facility. There is no incentive to accommodate without clearer guidance about use of single rooms and what may actually be feasible.

**8. Patient Placement**

*P 11. 3.C.4.b ..... patients may be cohorted into groups of those who are symptomatic, exposed but asymptomatic, and unexposed with access to separate toilets for each group. (Cat. IB)*

**APIC Recommendation 16.**

Additional guidance is needed for monitoring symptom development of the group (exposed but asymptomatic) or consider the option of cohorting only infected vs. non-infected groups.

APIC appreciates the opportunity to provide comments to the Healthcare Infection Control Practices Advisory Committee in its efforts to produce a comprehensive evidence-based guideline. We look forward to alerting our membership of the final outcome of this document.

Sincerely,

A handwritten signature in black ink, appearing to read "Cathryn Murphy".

Cathryn Murphy, RN, PhD, CIC  
2010 APIC President

A handwritten signature in black ink, appearing to read "Denise Graham".

Denise Graham  
Executive Vice President

**References:**

1. Harris JP, Lopman BA, O'Brien SJ. Infection control measures for norovirus: a systematic review of outbreaks in semi-enclosed settings. *J Hosp Infect* 2010;74:1-9.
2. Aoki Y, Suto A, Mizuta K, Ahiko T, Osaka K, Matsuzaki Y. Duration of norovirus excretion and the longitudinal course of viral load in norovirus-infected elderly patients. *J Hosp Infect.* 2010;75:42-6.